

#### STATE OF TENNESSEE - THE TENNESSEE PLAN

OTHER POST-EMPLOYMENT BENEFITS
ACTUARIAL REPORT AS OF JULY 1, 2015 FOR FISCAL YEAR
ENDING JUNE 30, 2016



May 13, 2016

Mr. Ike Boone
Financial Oversight Coordinator
F&A Division of Accounts
State of Tennessee
14<sup>th</sup> Floor, William Snodgrass Tower
312 Rosa L. Parks Ave.
Nashville, TN 37243

Re: GASB Statement No. 45 Actuarial Valuation
Of Other Post-Employment Benefits (OPEB)

Dear Mr. Boone:

Gabriel, Roeder, Smith & Company (GRS) has been engaged by State of Tennessee to perform Actuarial Valuations of Other Post-Employment Benefits (OPEB) provided through the State's group insurance plans. We are pleased to present herein the results of the valuation of benefits provided to retirees covered under the Tennessee Plan (the Medicare Supplement).

The Valuation was performed as of July 1, 2015 with results applicable to the fiscal year ending June 30, 2016 and covers the direct premium subsidy offered to State retirees, retired teachers and retirees from certain local entities subsidizing retiree coverage. This Report presents the cost and liability attributed to employees and retirees of the State government and institutions of higher education as well as local governments.

The actuarial calculations were prepared for the purposes of complying with the requirements of Statement No. 45 of the Governmental Accounting Standards Board (GASB) and have been made on a basis consistent with our understanding of these accounting standards. Determinations of the liability associated with the benefits described in this Report for purposes other than satisfying the financial reporting requirements of participating governmental entities, may produce significantly different results. This Report may be provided to parties other than the State of Tennessee only in its entirety and only with the permission of the State.

All actuarial calculations were performed on the basis of the Substantive Plan and the Actuarial Assumptions and Methods, as set forth in the respective sections of this Report.

The Valuation was performed on the basis of employee, retiree and financial information supplied by officials of the State and the Tennessee Consolidated Retirement System. We checked for internal reasonableness and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by officials of the State and the Tennessee Consolidated Retirement System. Results by employer, as reflected on the pages at the end of this Report, are based on data provided by State representatives (including indicators as to what employer the employees and retirees are associated with as of June 30, 2015). We did not audit or validate this census data. Furthermore, while the actuarial assumptions and methods employed are reasonable for the group as a whole, they may not be reasonable for any individual employer.

The calculations are based upon assumptions regarding future events, which may or may not materialize. They are also based upon the current plan provisions that are outlined in this Report. If you have reason to believe that the assumptions that were used are unreasonable, that the plan provisions are incorrectly described, that

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important plan provisions relevant to this proposal are not described, or that conditions have changed since the calculations were made, you should contact the author(s) of this report prior to relying on information in the report.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions, applicable law, accounting standards and interpretations. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements.

To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the plan as of the valuation date. All assumptions and calculations have been made in conformity with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. If you have reason to believe that the information provided in this Report is inaccurate, or is in any way incomplete, or if you need further information in order to make an informed decision on the subject matter of this Report, please contact the author of the Report prior to making such decision.

James J. Rizzo and Piotr Krekora are members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein.

The signing actuaries are independent of the plan sponsor.

Gabriel, Roeder, Smith & Company will be pleased to review this valuation report and to answer any questions pertaining to the valuation.

Piotr Krekora, ASA, MAAA

Respectfully submitted,

GABRIEL, ROEDER, SMITH AND COMPANY

James J. Rizzo, ASA, MAAA Senior Consultant & Actuary

Senior Consultant & Actuary Consultant & Actuary

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## SECTION A EXECUTIVE SUMMARY

#### **EXECUTIVE SUMMARY**

The results presented herein are applicable to the year ending June 30, 2016 and are based on an Actuarial Valuation performed as of July 1, 2015. We are also including projected results to be used for the June 30, 2017 reporting in the absence of significant changes.

This Actuarial Valuation and Report covers the OPEBs provided to the retirees through the Tennessee Plan (the Medicare Supplement). This report does not address liabilities for benefits provided through the State Employee Group Plan, Local Education Employee Group Plan and Local Government Employee Group Plan. The Substantive Plan provisions for the OPEBs provided through the Tennessee Plan are described in the Section at the end of this Report entitled "Summary of Substantive Plan Provisions."

#### GASB'S RATIONALE

Prior to implementation of GASB Statement Nos. 43 and 45, the costs of OPEBs had been reflected in the majority of governmental financial statements on a pay-as-you-go basis of accounting. The issuance of GASB Statement Nos. 43 and 45 reflected GASB's effort in moving toward full accrual accounting for all governmental entities which issue government-wide financial statements according to generally accepted accounting principles.

The subsidy provided by the State had been recorded as an expense only after employees retire, and then only one year at a time as the subsidy is paid. Statement No. 45 views the subsidy for retiree medical benefits as a form of compensation which must be accrued on the books of the subsidizing governmental entity during an employee's working life, rather than waiting until the employee's service to the government has been completed and he or she has retired. So GASB requires the lifetime value of that subsidy to be expensed over the working career of the employees.

#### DIRECT SUBSIDIES

Multiple levels of the direct premium subsidy are being offered to the retirees covered under the Tennessee Plan. In general, State retirees receive premium subsidies from the State; Local Government Agency retirees may be eligible for subsidies from their employers and Local Education Agency retirees may be receiving subsidies from both the State and their employer. More details can be found in the section titled "Summary of the Substantive Plan Provisions".

#### IMPLICIT RATE SUBSIDY

The Tennessee Plan is a supplemental plan covering Medicare eligible retirees of the State, local Tennessee governments and local education employers. Premium rates for the Tennessee Plan are developed based on claims and other costs incurred by the covered Medicare eligible retirees without blending the experience of active employees or non-Medicare retirees. Consequently, the gross premiums are deemed to be not implicitly subsidized by the employer. Furthermore, the direct subsidy provided is a flat dollar subsidy unrelated to the expected claims or gross premiums charged. No implicit subsidies are provided.

#### FUNDED AND UNFUNDED PLANS

Currently, the State's OPEB benefits are unfunded. That is, there is no separate Trust Fund or equivalent arrangement into which the employers make contributions to advance-fund the obligation, as they do for its pension plan, the Tennessee Consolidated Retirement System (TCRS). Therefore, the ultimate subsidies which

are provided over time are financed directly by general assets of the employer. These assets are invested in short-term fixed income instruments according to its current investment policy.

Consequently, according to GASB Statement No. 45, the interest discount rate used to calculate the present values and costs of the OPEB must be the long-range expected return on such short-term fixed income instruments. The State selected an interest discount rate of 3.75% for this purpose. If the OPEB Plan were advance-funded with its assets invested in a reasonable mix of stocks and longer bonds and, if the plan adopted a Funding Policy to make fully funding cash deposits into a qualifying OPEB Trust, then a much higher interest discount rate may be used, say, 5.5% to 6.5%. This would result in a substantially lower Annual OPEB Cost and a substantially lower Unfunded Actuarial Accrued Liability than if 3.75% were used.

#### ACTUARIAL ASSUMPTIONS

In any long-term actuarial valuation (such as for Pensions and OPEBs), certain demographic, economic and behavioral assumptions are made concerning the population, the investment discount rates and the benefits provided. Examples include assumptions about future employment, mortality, and participation or acceptance rates. Future determinations of the funded status of the plan and the employer's annual required contributions are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. These actuarial assumptions form the basis for the actuarial model which is used to project the future population, the future benefits provided, and the future contributions collected. Then the investment discount rate assumption is used to discount those projected net OPEB benefits to a present value. This and other related present values are used to calculate the Annual OPEB Cost that will be expensed in the State's financial statements and the unfunded actuarial accrued liability disclosed in the statements as well.

Calculations for financial reporting purposes are based on the benefits provided under terms of the substantive plan (the plan as understood by the employer and the plan members) in effect on the valuation date with provisions for changes through the end of the reporting year and on the pattern of sharing costs between the employer and plan members to that point. Projection of benefits for financial reporting purposes are based on the current legal or contractual obligations of employers without making explicit provisions for potential future changes in the pattern of cost sharing between the employer and plan members in the future. Actuarial calculations reflect a long-term perspective. Consistent with that perspective, actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities.

It would be instructive to review the Section of this Report titled, "Actuarial Assumptions and Methods" for details of all the relevant Actuarial Assumptions used in this Valuation.

#### ACTUARIAL COST METHODS

GASB Statement No. 45 allows flexibility to governmental employers in the use of various actuarial cost methods. For consistency with the prior valuations, results presented herein have been obtained with the Projected Unit Credit actuarial cost method with an amortization of the unfunded actuarial accrued liability as a level percent of expected payroll.

#### SUMMARY

Following is a chart that summarizes the results of this Actuarial Valuation as they apply to the State's liability for providing OPEB to State retirees and retired teachers. Amounts illustrated below exclude liability assumed by local employers. Figures applicable to local employers are summarized in the body of the report and presented in more detail in the appendices.

A	s of	July 1, 2015	July 1, 2013 <sup>1</sup>	July 1, 2013 <sup>1</sup>
Actuarial Accrued Liability	\$	309,115,570	\$ 291,367,170	\$ 291,367,170
Actuarial Value of Assets Unfunded Actuarial Accrued Liability		309,115,570	291,367,170	291,367,170
For F	YE	June 30, 2016	June 30, 2015	June 30, 2014
Annual Required Contribution		22,231,552	21,268,390	20,588,360
Per Covered Active Employee		204	193	186
As % of Expected Payroll		0.7%	0.7%	0.6%
Annual OPEB Cost		22,212,592	21,388,624	20,698,867
Employer Contribution Toward the OPEB Co	ost	TBD	(12,134,000)	(11,263,000)
Addition to Net OPEB Obligation		TBD	9,254,624	9,435,867
Net OPEB Obligation		TBD	125,895,491	116,640,867

<sup>&</sup>lt;sup>1</sup> As reflected in the State's Comprehensive Annual Financial Reports.

#### ACCRUED LIABILITY AND ANNUAL OPEB COST

The Unfunded Actuarial Accrued Liability represents an actuarial measurement of the funding obligation that is attributable to prior service, based on the actuarial cost method used to allocate the cost to prior years of employment. This will be displayed in the Notes to Financial Statements and Required Supplementary Information within the State's annual financial statement.

The Annual OPEB Cost is the amount that is expensed for the year. Since the State's OPEB plan is currently unfunded, the offset to that expense comes from actual subsidies paid on behalf of the current retirees and their dependents for the current year. This offset is called the Employer Contribution and equals the total premium subsidies paid by the State on behalf of the covered.

The cumulative difference between the Annual OPEB Cost for the year and the Employer Contribution for the year is called the Net OPEB Obligation. This is the amount of the expense charged for the year (per GASB No. 45) which was not yet offset by Employer Contributions. The Net OPEB Obligation will be reflected as a liability in the Statement of Net Position of the State's annual financial statement. It flows right to the balance sheet, remains there, and accumulates each year until fully paid off by future Employer Contributions.

#### CHANGES IN COSTS AND LIABILITIES

The Unfunded Actuarial Accrued Liability and accounting expense have a tendency to increase from one valuation to the next for any ongoing plan with no benefit reductions and no advance funding in a trust. A detailed analysis of the root causes of all changes in costs and liabilities is beyond the scope of this report. Nonetheless below we briefly discuss some of the factors contributing to the changes, to the extent feasible. We did not measure the impact of each individual change and the order does not have any particular significance.

Changes in covered population: The number of retirees eligible for the State benefits included in the Valuation increased from 37,824 as of 7/1/2013 to 39,092 as of 7/1/2015. At the same time, the number of active employees included in the State subsidy valuation decreased from 110,422 to 108,816. The combined population changes had an increasing effect on the costs and liabilities.

- Valuation Discount Rate: Upon discussion and direction from State officials, we have decreased the discount rate used to calculate the present values and costs of the OPEB. According to GASB Statement No. 45, this rate must be the long-range expected return on such short-term fixed income instruments. Given the recent trend in long term forecasts, we revised the discount rate from 4.0% used previously to 3.75%. This change had an increasing effect on the costs and liabilities. Lowering the discount rate increased the aggregate Actuarial Accrued Liability by approximately 4.1%.

As can be seen from this summary of changes, there may have been offsetting factors at work to change the results from the last full Valuation to this one. The net effect was an increase in plan's accounting liabilities and on the plan's accounting expense.

## SECTION B SUMMARY OF ACTUARIAL VALUATION RESULTS

#### **ACTUARIAL VALUATION RESULTS AS OF JULY 1, 2015 State Subsidies** State Retirees' Teachers' **Portion of Medicare** (State Portion) **Total State Costs Subsidy Medicare Subsidy** Number of Participants Covered **Active Participants** 69,025 39.791 108,816 **Retired Participants** 23,422 15,670 39,092 92,447 147,908 **Total Participants** 55,461 3,294,627,486 **Expected Payroll of Active Participants** \$ 3,294,627,486 N/A Actuarial Present Value of Benefits **Active Participants** 106,191,266 80,038,866 186,230,132 **Retired Participants** 94,692,613 94,273,598 188,966,211 174,312,464 200.883.879 375.196.343 Total Actuarial Present Value of Benefits Actuarial Accrued Liability (Projected Unit Credit Actuarial Cost Method) **Active Participants** 51.142.979 69.006,380 120,149,359 **Retired Participants** 94,692,613 94,273,598 188,966,211 Total Actuarial Accrued Liability 163,698,993 145,416,577 309,115,570 Actuarial Value of Assets Unfunded Actuarial Accrued Liability 163,698,993 145,416,577 309,115,570 **Annual Required Contribution** of the Employer (ARC) for YE 6/30/16 (Projected Unit Credit Actuarial Cost Method) Normal Cost 3,775,102 2,686,503 6,461,605 15,769,947 Amortization of UAAL 8,514,569 7,255,378 12,289,671 9,941,881 Annual Required Contribution for FYE 6/30/16 22,231,552 Per Active Participant 178 250 204 As % of Expected Payroll 0.4% N/A 0.7% Annual OPEB Cost for FYE 6/30/16 ARC 12,289,671 9,941,881 22,231,552 Interest on NOO 2,841,795 1,879,286 4,721,081 Adjustment to ARC (2,853,208)(1,886,833)(4,740,041)Total Annual OPEB Cost for FYE 6/30/16 12,278,258 9,934,334 22,212,592

#### **UAAL Amoritzation Period and Payments** for State Employees' Portion of Medicare Subsidy

Date Established	Original UAAL Amount	Amount Amount		Amortization Payment
July 1, 2007	\$ 200,079,000	\$ 193,489,189	22	\$ 9,657,225
July 1, 2009	8,847,000	8,658,038	24	398,924
July 1, 2011	11,151,000	11,019,696	26	471,991
July 1, 2013	(62,912,086)	(62,870,328)	28	(2,518,101)
July 1, 2015	13,402,398	13,402,398	30	504,530
Total		163,698,993		8,514,569

#### **UAAL Amoritzation Period and Payments** for Teachers' (State Portion) Medicare Subsidy

Date Established	Original UAAL Amount			Amortization Payment
July 1, 2007	\$ 140,464,000	\$ 135,837,552	22	\$ 6,779,778
July 1, 2009	17,864,000	17,482,417	24	805,512
July 1, 2011	4,658,000	4,603,155	26	197,160
July 1, 2013	(23,386,464)	(23,370,941)	28	(936,060)
July 1, 2015	10,864,394	10,864,394	30	408,988
Total		145,416,577		7,255,378

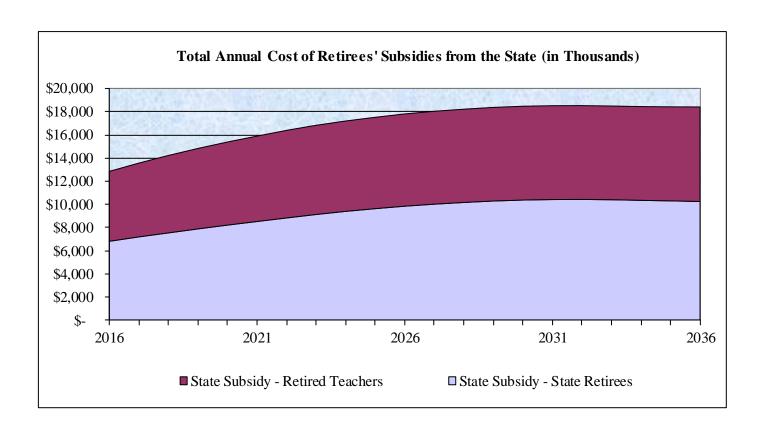
#### ACTUARIAL VALUATION RESULTS AS OF JULY 1, 2015 **Local Education and Local Government Subsidies**

	Local Education Employers	Local Government Employers	Local Education and Government Employers
Number of Participants Covered			
Active Participants	10,274	13,798	24,072
Inactive Participants	3,434	211	3,645
Total Participants	13,708	14,009	27,717
Actuarial Present Value of Benefits			
Active Participants	114,315,273	19,293,555	133,608,828
Retired Participants	60,312,337	701,163	61,013,500
Total Actuarial Present Value of Benefits	174,627,610	19,994,718	194,622,328
Actuarial Accrued Liability (Projected Unit Credit Actuarial Cost Method)			
Active Participants	63,867,048	12,609,442	76,476,490
Retired Participants	60,312,337	701,163	61,013,500
Total Actuarial Accrued Liability	124,179,385	13,310,605	137,489,990
Actuarial Value of Assets	-	-	-
Unfunded Actuarial Accrued Liability	124,179,385	13,310,605	137,489,990
Annual Required Contribution of the Employer (ARC) for YE 6/30/16 (Projected Unit Credit Actuarial Cost Method)			
Normal Cost	4,990,608	726,067	5,716,675
Amortization of UAAL	5,403,830	619,739	6,023,569
Annual Required Contribution for FYE 6/30/16	<u>\$ 10,394,438</u>	<u>\$ 1,345,806</u>	<u>\$ 11,740,244</u>
Per Active Participant	\$ 1,012	\$ 98	\$ 488

#### TWENTY-YEAR PROJECTION OF UNFUNDED CASH FLOW

The table and graph below illustrate, based on a closed group projection, how the cost of the benefits is distributed between the Employer and the retirees.

Fiscal Year Ending on 6/30	State Employees' Portion of Medicare Subsidy	Teachers' (State Portion) Medicare Subsidy	Total State Subsidy Expected	
2016	\$ 6,811,737	\$ 6,037,685	\$ 12,849,422	
2021	8,518,884	7,377,299	15,896,183	
2026	9,842,653	7,967,900	17,810,553	
2031	10,417,864	8,104,410	18,522,274	
2036	10,247,457	8,168,172	18,415,629	

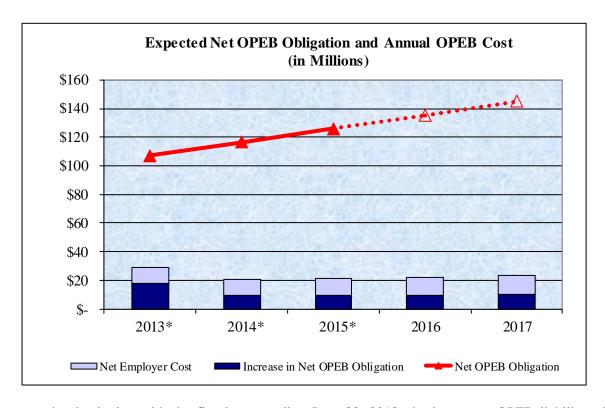


#### TWO-YEAR PROJECTION OF NET OPEB OBLIGATION

All results presented in this report assume no advance-funding of the OPEB Plan. It is also assumed that the current benefit structure of the Plan continues without changes. The table below illustrates how the Net OPEB Obligation, presented as a liability in the Statement of Net Position, is expected to continue increasing over the next two years assuming no implementation of advance-funding. Projected numbers below would be presented in the Financial Statement for the year ending June 30 of the year indicated.

Fiscal Year Ending on 6/30	Total Annual OPEB Cost at Fiscal Year End (in Thousands)	Current Total State Subsidy (in Thousands)	Annual Increase in Net OPEB Obligation (in Thousands)	Net OPEB Obligation at Fiscal Year End (in Thousands)
2013*	\$ 28,724	\$ 10,599	\$ 18,125	\$ 107,205
2014*	20,699	11,263	9,436	116,641
2015*	21,389	12,134	9,255	125,895
2016	22,213	12,849	9,363	135,259
2017	23,530	13,568	9,963	145,221

<sup>\*</sup> As reflected in the State's Comprehensive Annual Financial Reports.



Please note that beginning with the fiscal year ending June 30, 2018, the long term OPEB liability will be reported according to GASB Statement No. 75. Effects of implementing that new standard are not illustrated above.

### AGE/SERVICE DISTRIBUTION FOR FUTURE MEDICARE SUPPLEMENT PLAN PARTICIPANTS: CURRENT STATE EMPLOYEES AND RETIREES

A == C		Years of S	Service to V	aluation I	Date - Acti	ve State E	mployees	
Age Group	0-4	5-9	10-14	15-19	20-24	25-29	30&Up	Total
0 - 14	-	-	-	-	-	-	-	-
15 - 19	60	-	-	-	-	-	-	60
20 - 24	1,256	6	-	-	-	-	-	1,262
25 - 29	4,195	440	14	-	-	-	-	4,649
30 - 34	3,811	1,799	471	15	-	-	-	6,096
35 - 39	3,035	1,968	1,700	471	9	-	-	7,183
40 - 44	2,465	1,920	1,874	1,339	323	12	-	7,933
45 - 49	2,129	1,789	1,729	1,406	1,079	459	25	8,616
50 - 54	1,923	1,636	1,743	1,398	1,187	1,408	662	9,957
55 - 59	1,578	1,457	1,604	1,428	1,229	1,363	1,636	10,295
60 - 64	960	1,181	1,294	1,030	1,017	983	1,637	8,102
65 - 69	299	483	544	459	420	462	868	3,535
70 - 99	69	141	191	173	162	172	429	1,337
Total	21,780	12,820	11,164	7,719	5,426	4,859	5,257	69,025

The inner box represents current eligibility for Early or Normal Retirement.

Age Group	State Retire	es Retirees ir Plan	<b>Tennessee</b>	Age Group	State Retirees not yet in Tennesso Plan		Tennessee
	Male	Female	Total		Male	Female	Total
0 - 44	2	3	5	0 - 44	20	31	51
45 - 49	-	5	5	45 - 49	33	65	98
50 - 54	3	1	4	50 - 54	232	377	609
55 - 59	9	12	21	55 - 59	795	1,258	2,053
60 - 64	60	81	141	60 - 64	1,969	2,932	4,901
65 - 69	1,831	2,424	4,255	65 - 69	-	-	-
70 - 74	1,936	2,173	4,109	70 - 74	-	-	-
75 - 79	1,464	1,582	3,046	75 - 79	-	-	-
80 - 84	968	1,156	2,124	80 - 84	-	-	-
85 - 89	522	896	1,418	85 - 89	-	-	-
90 - 94	164	302	466	90 - 94	-	-	-
95 - +	27	89	116	95 - +	-	-	-
Total	6,986	8,724	15,710	Total	3,049	4,663	7,712

#### AGE/SERVICE DISTRIBUTION FOR FUTURE MEDICARE SUPPLEMENT PLAN PARTICIPANTS: CURRENT LOCAL GOVERNMENT EMPLOYEES AND RETIREES

Ago Choun	Year	rs of Servic	ce to Valuat	ion Date - A	Active Loca	ıl Governm	ent Employ	vees
Age Group	0-4	5-9	10-14	15-19	20-24	25-29	30&Up	Total
0 - 14	-	-	-	-	-	-	-	-
15 - 19	17	-	-	-	-	-	-	17
20 - 24	379	3	-	-	-	-	-	382
25 - 29	704	160	5	-	-	-	-	869
30 - 34	469	380	155	5	-	-	-	1,009
35 - 39	410	357	460	169	3	_	_	1,399
40 - 44	475	338	379	482	123	4	-	1,801
45 - 49	455	402	369	363	378	107	4	2,078
50 - 54	384	407	386	361	325	230	72	2,165
55 - 59	314	277	327	370	284	196	157	1,925
60 - 64	204	199	189	198	215	138	149	1,292
65 - 69	102	90	102	75	<b>79</b>	62	64	574
70 - 99	43	33	56	43	40	34	38	287
Total	3,956	2,646	2,428	2,066	1,447	771	484	13,798

The inner box represents current eligibility for Early or Normal Retirement.

Age Group		vernment Ro ennessee Pla		Age Group	Local Government not yet in Tennessee Plan		_
	Male	Female	Total		Male	Female	Total
0 - 44	-	-	-	0 - 44	-	-	-
45 - 49	-	-	-	45 - 49	-	1	1
50 - 54	1	-	1	50 - 54	2	-	2
55 - 59	-	-	-	55 - 59	7	5	12
60 - 64	3	-	3	60 - 64	15	9	24
65 - 69	34	18	52	65 - 69	-	-	-
70 - 74	15	15	30	70 - 74	-	-	-
75 - 79	13	21	34	75 - 79	-	-	-
80 - 84	12	17	29	80 - 84	-	-	-
85 - 89	8	12	20	85 - 89	-	-	-
90 - 94	1	2	3	90 - 94	-	-	-
95 - +	-	-	-	95 - +	-	-	-
Total	87	85	172	Total	24	15	39

#### AGE/SERVICE DISTRIBUTION FOR FUTURE MEDICARE SUPPLEMENT PLAN PARTICIPANTS: CURRENT LOCAL EDUCATION EMPLOYEES AND RETIREES

Following schedules include employees and retirees eligible for either State subsidy, local subsidy or both.

Ago Choun	Yes	ars of Serv	ice to Valua	tion Date -	Active Loc	cal Education	on Employe	ees
Age Group	0-4	5-9	10-14	15-19	20-24	25-29	30&Up	Total
0 - 14	-	-	-	-	-	-	-	-
15 - 19	4	-	-	-	-	-	-	4
20 - 24	784	-	-	-	-	-	-	784
25 - 29	3,702	857	2	-	-	-	-	4,561
30 - 34	1,473	3,346	717	8	-	-	-	5,544
35 - 39	1,071	1,485	2,751	749	2	-		6,058
40 - 44	844	1,120	1,278	2,704	573	2	-	6,521
45 - 49	626	911	891	1,164	2,096	417	1	6,106
50 - 54	460	633	698	839	857	1,388	374	5,249
55 - 59	299	418	545	765	653	652	1,324	4,656
60 - 64	160	299	292	413	479	373	1,130	3,146
65 - 69	67	126	126	125	172	135	317	1,068
70 - 99	32	40	57	48	54	36	109	376
Total	9,522	9,235	7,357	6,815	4,886	3,003	3,255	44,073

The inner box represents current eligibility for Early or Normal Retirement.

Age Group		ducation Ret ennessee Plan		Age Gr	oup		ation Retiree ennessee Pla	ŭ
	Male	Female	Total			Male	Female	Total
0 - 44	1	1	2	0 -	44	3	7	10
45 - 49	1	2	3	45 -	49	10	15	25
50 - 54	-	4	4	50 -	54	41	121	162
55 - 59	3	14	17	55 -	59	232	962	1,194
60 - 64	40	146	186	60 -	64	840	3,114	3,954
65 - 69	1,276	3,368	4,644	65 -	69	-	-	-
70 - 74	902	2,183	3,085	70 -	74	-	-	-
75 - 79	487	1,392	1,879	75 -	79	-	-	-
80 - 84	398	1,061	1,459	80 -	84	-	-	-
85 - 89	222	730	952	85 -	89	-	-	-
90 - 94	55	272	327	90 -	94	-	-	-
95 - +	11	113	124	95 -	+	-	-	-
Total	3,396	9,286	12,682	Tota	l	1,126	4,219	5,345

## SECTION C ACTUARIAL ASSUMPTIONS AND METHODS

### METHODS AND DEMOGRAPHIC/ECONOMIC ASSUMPTIONS

**Actuarial Valuation Date:** July 1, 2015 for employee and retiree population purposes, for development

of per capita cost purposes and for Valuation purposes.

Actuarial Cost Method: Projected Unit Credit Cost Method (PUC). Under this method, the total

expected benefit is allocated pro rata to all years of expected employment (divided into equal units) for each participant individually. The present value of the benefits allocated to the valuation year constitutes the Normal Cost, while present value of all such allocations to the past years of employment constitutes to the Actuarial Accrued Liability for active

employees.

Amortization Period and Method:

The Unfunded Actuarial Accrued Liability, as calculated pursuant to the Projected Unit Credit Actuarial Cost Method, is amortized in a closed amortization, calculated as a level percent of payroll over a 30 year period for each new amortization base created annually. The assumed rate of payroll growth is 3.00%. GASB Statement No. 45 requires that any such payroll growth assumption be based upon no increase in the number of active

employees covered by the plan.

Investment Discount Rate Since there are currently no invested plan assets held in trust to finance the

OPEB obligations, the investment return discount rate is the long-term expectation of investment return on assets held in State funds pursuant to its

Investment Policy. The State has selected 3.75% compounded annually.

**Price Inflation:** Long term price inflation is assumed to be 2.5% per year.

Tennessee Consolidated
Retirement System:

Unless noted otherwise, demographic assumptions employed in this Actuarial Valuation were generally the same as those employed in the July 1, 2013 Pension Actuarial Valuation of the Tennessee Consolidated Retirement System (TCRS) and applicable to Group I employees. These demographic assumptions were developed by TCRS in an Actuarial Experience Study, (undertaken on behalf of TCRS), and are considered appropriate for use in this OPEB Actuarial Valuation. These include assumed rates of future

termination, mortality, disability, and retirement.

In the following pages, we outline assumptions used in this Actuarial

Valuation.

**Data Assumptions:** Upon advice from the TCRS representatives whenever we encountered a

discrepancy between expected service and service reported for this valuation,

imputed service was used.

Mortality Tables: Mortality tables are used to measure the probabilities of participants dying

before and after retirement. The post-retirement rates are the same as those used by TCRS but with added generational mortality improvements from its 2010 mid-point base year using the Society of Actuaries' Scale BB. The pre-

retirement rates are based on the RP-2000 Mortality Table with generational improvements from its 2000 mid-point base year using the same Scale BB.

Mortality rates for impaired (from disability) lives are the same as those used by TCRS and are taken from the gender distinct table published in the IRS Revenue Ruling 96-7 for disabled lives with a 10% load.

#### **Rates of Termination from Active Employment:**

These rates do not apply to participants eligible for Normal Retirement and do not include separation on account of death or disability. Termination rates are used to measure the probabilities of participants terminating employment for other reasons. The rates are based on the number of years of service and on age.

		% Se	parating	Within Ne	ext Year -	Group I -	Teachers					
		Male										
Years of					Attain	ed Age						
Service	20	20 25 30 35 40 45 50 55 60 65										
0	18.0%	18.0%	18.0%	18.0%	18.0%	18.4%	19.7%	22.1%	25.5%	28.0%		
1	13.5%											
2	10.0%											
3	10.0%	8.5%	6.0%	3.6%	2.0%	1.5%	2.0%	3.1%	4.7%			
4	10.0%	8.5%	6.0%	3.6%	2.0%	1.5%	2.0%	3.1%	4.7%			
5	10.0%	8.5%	6.0%	3.6%	2.0%	1.5%	2.0%	3.1%	4.7%			
6	10.0%	8.5%	6.0%	3.6%	2.0%	1.5%	2.0%	3.1%	4.7%			
7	10.0%	8.5%	6.0%	3.6%	2.0%	1.5%	2.0%	3.1%	4.7%			
8	10.0%	8.5%	6.0%	3.6%	2.0%	1.5%	2.0%	3.1%	4.7%			
9	10.0%	8.5%	6.0%	3.6%	2.0%	1.5%	2.0%	3.1%	4.7%			
10 or more	10.0%	8.5%	6.0%	3.6%	2.0%	1.5%	2.0%	3.1%	4.7%			
-												

					Fei	male				
Years of					Attain	ed Age				
Service	20	25	30	35	40	45	50	55	60	65
0	18.0%	18.0%	18.0%	18.0%	18.0%	18.4%	19.7%	22.1%	25.5%	28.0%
1	13.5%	13.5%	13.5%	13.5%	13.5%	13.5%	14.2%	16.8%	21.6%	23.5%
2	10.5%	10.0%	7.6%	4.6%	2.3%	1.1%	1.6%	3.8%	5.0%	
3	10.5%	10.0%	7.6%	4.6%	2.3%	1.1%	1.6%	3.8%	5.0%	
4	10.5%	10.0%	7.6%	4.6%	2.3%	1.1%	1.6%	3.8%	5.0%	
5	10.5%	10.0%	7.6%	4.6%	2.3%	1.1%	1.6%	3.8%	5.0%	
6	10.5%	10.0%	7.6%	4.6%	2.3%	1.1%	1.6%	3.8%	5.0%	
7	10.5%	10.0%	7.6%	4.6%	2.3%	1.1%	1.6%	3.8%	5.0%	
8	10.5%	10.0%	7.6%	4.6%	2.3%	1.1%	1.6%	3.8%	5.0%	
9	10.5%	10.0%	7.6%	4.6%	2.3%	1.1%	1.6%	3.8%	5.0%	
10 or more	10.5%	10.0%	7.6%	4.6%	2.3%	1.1%	1.6%	3.8%	5.0%	

	(	% Separat	ting Withi	in Next Yo	ear - Grou	ıp I - Gene	eral Empl	oyees		
		Male								
Years of					Attain	ed Age				
Service	20	20   25   30   35   40   45   50   55   60   65								
0	30.0%	25.4%	23.0%	20.8%	18.6%	16.5%	14.8%	15.3%	17.9%	24.0%
1	24.6%	21.4%	18.6%	16.1%	13.8%	12.0%	11.1%	11.6%	14.4%	20.5%
2	17.8%	14.4%	9.6%	5.2%	2.6%	1.8%	2.2%	2.6%	4.3%	
3	17.8%	14.4%	9.6%	5.2%	2.6%	1.8%	2.2%	2.6%	4.3%	
4	17.8%	14.4%	9.6%	5.2%	2.6%	1.8%	2.2%	2.6%	4.3%	
5	17.8%	14.4%	9.6%	5.2%	2.6%	1.8%	2.2%	2.6%	4.3%	
6	17.8%	14.4%	9.6%	5.2%	2.6%	1.8%	2.2%	2.6%	4.3%	
7	17.8%	14.4%	9.6%	5.2%	2.6%	1.8%	2.2%	2.6%	4.3%	
8	17.8%	14.4%	9.6%	5.2%	2.6%	1.8%	2.2%	2.6%	4.3%	
9	17.8%	14.4%	9.6%	5.2%	2.6%	1.8%	2.2%	2.6%	4.3%	
10 or more	17.8%	14.4%	9.6%	5.2%	2.6%	1.8%	2.2%	2.6%	4.3%	

					Fen	nale				
Years of		Attained Age								
Service	20	25	30	35	40	45	50	55	60	65
0	30.0%	25.4%	23.0%	20.8%	18.6%	16.5%	14.8%	15.3%	17.9%	24.0%
1	24.6%	21.4%	18.6%	16.1%	13.8%	12.0%	11.1%	11.6%	14.4%	20.5%
2	18.3%	14.8%	10.3%	6.3%	3.4%	2.2%	2.3%	3.4%	4.9%	
3	18.3%	14.8%	10.3%	6.3%	3.4%	2.2%	2.3%	3.4%	4.9%	
4	18.3%	14.8%	10.3%	6.3%	3.4%	2.2%	2.3%	3.4%	4.9%	
5	18.3%	14.8%	10.3%	6.3%	3.4%	2.2%	2.3%	3.4%	4.9%	
6	18.3%	14.8%	10.3%	6.3%	3.4%	2.2%	2.3%	3.4%	4.9%	
7	18.3%	14.8%	10.3%	6.3%	3.4%	2.2%	2.3%	3.4%	4.9%	
8	18.3%	14.8%	10.3%	6.3%	3.4%	2.2%	2.3%	3.4%	4.9%	
9	18.3%	14.8%	10.3%	6.3%	3.4%	2.2%	2.3%	3.4%	4.9%	
10 or more	18.3%	14.8%	10.3%	6.3%	3.4%	2.2%	2.3%	3.4%	4.9%	

	Male									
Years of	Attained Age									
Service	20	25	30	35	40	45	50	55	60	65
0	26.2%	23.0%	21.8%	20.7%	19.2%	17.7%	17.0%	17.4%	20.4%	26.3%
1	21.8%	19.1%	17.9%	17.0%	15.9%	14.1%	13.0%	13.0%	14.9%	19.1%
2	13.7%	10.3%	7.4%	5.1%	3.5%	2.8%	2.8%	3.6%	4.6%	
3	13.7%	10.3%	7.4%	5.1%	3.5%	2.8%	2.8%	3.6%	4.6%	
4	13.7%	10.3%	7.4%	5.1%	3.5%	2.8%	2.8%	3.6%	4.6%	
5	13.7%	10.3%	7.4%	5.1%	3.5%	2.8%	2.8%	3.6%	4.6%	
6	13.7%	10.3%	7.4%	5.1%	3.5%	2.8%	2.8%	3.6%	4.6%	
7	13.7%	10.3%	7.4%	5.1%	3.5%	2.8%	2.8%	3.6%	4.6%	
8	13.7%	10.3%	7.4%	5.1%	3.5%	2.8%	2.8%	3.6%	4.6%	
9	13.7%	10.3%	7.4%	5.1%	3.5%	2.8%	2.8%	3.6%	4.6%	
10 or more	13.7%	10.3%	7.4%	5.1%	3.5%	2.8%	2.8%	3.6%	4.6%	

					Fen	nale				
Years of		Attained Age								
Service	20	25	30	35	40	45	50	55	60	65
0	26.2%	23.0%	21.8%	20.7%	19.2%	17.7%	17.0%	17.4%	20.4%	26.3%
1	21.8%	19.1%	17.9%	17.0%	15.9%	14.1%	13.0%	13.0%	14.9%	19.1%
2	19.6%	15.1%	11.1%	7.7%	5.4%	4.1%	3.8%	4.3%	5.3%	
3	19.6%	15.1%	11.1%	7.7%	5.4%	4.1%	3.8%	4.3%	5.3%	
4	19.6%	15.1%	11.1%	7.7%	5.4%	4.1%	3.8%	4.3%	5.3%	
5	19.6%	15.1%	11.1%	7.7%	5.4%	4.1%	3.8%	4.3%	5.3%	
6	19.6%	15.1%	11.1%	7.7%	5.4%	4.1%	3.8%	4.3%	5.3%	
7	19.6%	15.1%	11.1%	7.7%	5.4%	4.1%	3.8%	4.3%	5.3%	
8	19.6%	15.1%	11.1%	7.7%	5.4%	4.1%	3.8%	4.3%	5.3%	
9	19.6%	15.1%	11.1%	7.7%	5.4%	4.1%	3.8%	4.3%	5.3%	
10 or more	19.6%	15.1%	11.1%	7.7%	5.4%	4.1%	3.8%	4.3%	5.3%	

#### **Rates of Disability:**

Disability rates are used to measure the probabilities of active participants becoming disabled.

	% Becomi	ng Disabled Withi	n Next Year	
Sample	Group I -	Teachers	Group I - Ger	neral Employees
Ages	Male	Female	Male	Female
20	0.01%	0.01%	0.06%	0.03%
25	0.01%	0.01%	0.06%	0.03%
30	0.01%	0.01%	0.07%	0.04%
35	0.03%	0.03%	0.11%	0.06%
40	0.08%	0.08%	0.16%	0.14%
45	0.14%	0.14%	0.22%	0.24%
50	0.17%	0.17%	0.27%	0.33%
55	0.17%	0.17%	0.27%	0.38%
60				
65				

% Becom	ing Disabled Withi	in Next Year
Sample	Group I - Politi	cal Subdivision
Ages	Male	Female
20	0.03%	0.03%
25	0.03%	0.03%
30	0.03%	0.03%
35	0.03%	0.03%
40	0.08%	0.08%
45	0.20%	0.20%
50	0.38%	0.38%
55	0.49%	0.49%
60		
65		

#### **Rates of Retirement:**

Rates of retirement are used to measure the probabilities of an eligible active employee retiring during the next year.

	Unreduced Retirement Annual Rates										
Sample		Group I									
Ages	Tea	Teachers State Political Subdivision									
	Male	Female	Male	Female	Male	Female					
50	6.5%	6.5%	6.0%	7.5%	9.0%	8.0%					
55	10.0%	10.0%	6.5%	7.5%	9.0%	8.0%					
60	15.0%	17.0%	8.5%	9.0%	10.5%	11.0%					
65	35.0%	37.5%	22.0%	22.0%	24.0%	22.0%					
70	16.0%	34.0%	15.5%	17.0%	18.0%	19.0%					
75	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					

Additional increments for retirees who have 15 or more years of service at retirement on or after age 60											
Tea	chers	St	ate	Political S	Subdivision						
Male	Female	Male	Female	Male	Female						
8.0%	8.0% 8.0% 2.0% 2.0% 2.0% 2.0%										

Additional	Additional increments for retirees in the year in which they are first eligible for unreduced retirement prior to age 60										
Tea	chers	St	ate	Political S	Subdivision						
Male	Female	Male	Female	Male	Female						
12.5%	12.5% 12.5% 7.5% 7.5% 7.5% 7.5%										

#### HEALTH COVERAGE ASSUMPTIONS

**Coverage Acceptance Rates:** 

Not all retirees will accept coverage and pay the required premium upon becoming eligible. Acceptance rates presented below result are from an analysis of the choice pattern exhibited by employees retiring in recent years.

Coverage Acceptance for Post-65 Elections				
Subsidy Level	Total Acceptance Rate			
Full Premium Paid by the Employer	100%			
\$50.00	75%			
\$37.50	60%			
\$25.00	50%			
None	25%			
Acceptance decrease due to diminishing value of the subsidy	0.50%			
Minimum Ultimate Acceptance Rate	25.00%			

**Expenses:** No additional expenses were considered.

**Expected Retiree Contributions:** 

Members are required to make monthly contributions in order to maintain their coverage. However, for the purpose of this Valuation we have only included the direct premium subsidy provided by employers and retiree contributions are not relevant to the OPEB calculations.

**Health Care Cost Trend Rates:** 

With the exception of three school districts, premium subsidies provided by the State and local governments are assumed to remain unchanged for the entire projection. Subsidies provided by Kingsport County Schools, Carter County Schools, and Sullivan County Schools are expected to grow with the total premiums charged by the Tennessee Plan. These premiums are expected to increase 1.5% for 2016 plan year, 6% for the following year and grade down to the ultimate level of 4.345% over a period of 34 years according to the SOA model developed by Professor Getzen.

#### CONSIDERATION OF HEALTH CARE REFORM

Summary of Selected Provisions and their effects

Excise Tax on High-Cost Employer Health Plans (aka Cadillac Tax) Effective 1/1/2020 The "Cadillac" tax is a 40% excise tax paid by the coverage provider (employer and/or insurer) on the value of health plan costs in excess of certain thresholds. The thresholds for active employees and Medicare eligible retirees are \$10,200 for single coverage or \$27,500 for family coverage in 2018 increased for inflation to 2020. Respective thresholds for retirees not eligible for Medicare are \$11,850 and \$30,950 for the year 2018 increased for inflation to 2020. Many plans are below the thresholds today, but are likely to exceed them in the next decade. The thresholds will be indexed at CPI-U, which is lower than the expected medical inflation rates affecting the cost of the plans. There is considerable uncertainty about how the tax would be applied, and considerable latitude in grouping of participants for tax purposes. Combining early retiree and Medicare eligible retiree costs is allowed and can keep plans under the thresholds for a longer period of time.

Based on the assumptions used for this Valuation, premiums required to be paid are projected to remain below the taxable threshold for at least 80 years. As such, the Tennessee Plan is not expected to be materially affected by implementation of the Excise Tax on High-Cost Employer Health Plans in the foreseeable future.

**Medicare Payment Reforms:** The health care reform legislation includes a variety of Medicare payment reforms and limits intending to reduce the overall cost of Medicare to the federal government. These reforms also serve to restrain the growth in costs that are paid by Medicare supplement arrangements such as the Tennessee Plan. However, since the State obligation is limited to providing a flat premium subsidy, these efforts will have no effect on the results of this valuation.

**Implementation of the new requirements:** We have not identified any specific provision of health care reform that would need to be implemented and to have a significant impact on the measured obligation. As additional guidance on the legislation is issued we will review and monitor those impacts.

#### MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

**Decrement Timing:** Decrements of all types are assumed to occur at the middle of the year.

Eligibility Testing: Eligibility for benefits is determined based upon the age nearest birthday

and service nearest whole year on the date the decrement is assumed to

occur.

**Decrement Relativity:** Decrement rates are treated as absolute rates of decrement.

**Adjustments:** None.

**Decrement Operation:** All decrements operate simultaneously. Disability and termination rates

cease upon eligibility for normal or early retirement.

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#### DEFINITIONS OF TECHNICAL TERMS

Actuarial Accrued Liability: Actuarial Accrued Liability is the actuarial present value of projected

future benefits that are attributable to an employees' service to date. Sometimes it is expressed as the difference between the actuarial present value of all future benefit payments and the actuarial present value of

future normal costs.

**Actuarial Assumptions:** These are factors for estimating expected future experience with respect to

occurrences of mortality, disability, turnover, retirement, rates of investment income and salary increases, coverage acceptance, trend, aging,

etc.

Actuarial Cost Method: This is a mathematical budgeting procedure for allocating the dollar

amount of the "actuarial present value of future benefit payments" between future normal costs and actuarial accrued liabilities. It is often referred to as the "Actuarial Funding Method" or "Actuarial Valuation Cost Method".

Actuarial Present Value: Actuarial Present Value of a series of expected payments (or a single

payment) is the amount of funds currently required to provide those expected payments in the future. This amount is determined by discounting future payments at predetermined rates of interest, taking into account the

probability of payment. It is also referred to as "Present Value."

**Amortization:** Amortization is a process of paying off, or recognizing, an interest-

discounted amount with periodic payments of interest and principal, (similar to paying off an installment loan) -- as opposed to paying it off

with a single sum.

**Annual Required Contribution:** 

(ARC):

The ARC is the portion of the present value of projected benefits that is attributable to the current period. Usually it is determined as the normal cost (as defined below) plus the portion of the unfunded actuarial accrued liability amortized in the current period. The ARC is an amount that is

actuarially determined to ensure that, if paid on an ongoing basis, it would

provide sufficient resources for future benefit payments.

Normal Cost is the actuarial cost of a portion of projected future benefits

allocated to the current year by the actuarial cost method. It is sometimes

referred to as "Current Service Cost."

**Unfunded Actuarial Accrued** 

**Liability (UAAL):** 

UAAL is the difference between actuarial accrued liability and the

actuarial value of plan assets.

## SECTION D SUMMARY OF SUBSTANTIVE PLAN PROVISIONS

#### THE TENNESSEE PLAN

(MEDICARE SUPPLEMENT)

#### SUMMARY OF SUBSTANTIVE PLAN PROVISIONS

AS OF JULY 1, 2015 AND THROUGH THE FYE JUNE 30, 2016

#### ELIGIBILITY FOR RETIREMENT

All retirees of the State of Tennessee, Local Education Agencies, and participating Local Government Agencies who satisfy the Disability, Vested Termination, Early or Normal Retirement provisions of the Tennessee Consolidated Retirement System (TCRS) may be eligible for the post-employment benefits under the State Group Insurance Medicare Supplement Program (The Tennessee Plan) upon attaining Medicare-eligibility. Any employee, with the exception of state judges, first hired on or after July 1, 1976 enters TCRS *Group I* regardless of employment classification. The following presents the *Group I* eligibility requirements for retirement under the Tennessee Consolidated Retirement System (TCRS):

**VESTED TERMINATION** Full vesting starts after 5 years of creditable service.

**DISABILITY RETIREMENT** 5 years of creditable service regardless of age.

**EARLY RETIREMENT** Earlier of (i) age 55 with 10 years of creditable service, or (ii) Any age with 25

years of service.

**NORMAL RETIREMENT** Earlier of (i) Age 60 with 5 years of creditable service (ii) Any age with 30

years of creditable service.

All retirees of the State of Tennessee's Higher Education institutions who participated in an optional retirement plan, instead of TCRS, may also be eligible for the post-employment benefits under The Tennessee Plan upon attaining Medicare-eligibility.

No other postemployment benefits are available to employees retiring with less than 10 years of service.

The Tennessee Plan coverage may commence upon the retiree's attainment of Medicare eligibility (age 65), even if the former employee chooses not to enroll in pre-65 retiree health coverage under the State program.

#### OTHER POST-EMPLOYMENT BENEFITS- FOR MEDICARE SUPPLEMENT UNDER "THE TENNESSEE PLAN"

Certain Other Post-Employment Benefits (OPEB) are available to all employees retiring from the State under the provisions of Disability, Early or Normal Retirement, as described above (except some grandfathered employees and retirees). The OPEB benefits include lifetime access to coverage for the retiree and spouse eligible for Medicare Part A under the Medicare Supplement (The Tennessee Plan), State provided subsidy for retiree premiums, as well as additional subsidies for retiree premiums provided by some local government or education employers.

#### HEALTH-RELATED BENEFITS

Medicare-eligible retirees may choose to participate in the State-sponsored Medicare Supplement plan, called "The Tennessee Plan". Spouses of retirees may be covered at the retiree's option upon reaching Medicare eligibility. Beginning July 1, 2015 only spouses of covered retirees will be offered coverage under the plan. Retirees and their dependents eligible for the Medicare benefits are required to enroll for Parts A and B under Medicare.

#### SURVIVORSHIP BENEFITS

The surviving spouse of a retiree is eligible to continue coverage under The Tennessee Plan subject to payments of the applicable premiums at the unsubsidized rate.

#### PREMIUM SUBSIDY PROVIDEDBY THE STATE TO RETIREES PARTICIPATING IN THE TENNESSEE PLAN

State retirees and retired teachers covered under the Tennessee Plan are eligible for a premium subsidy from the State. The amount of subsidy depends on the service at the time of retirement as illustrated below:

Monthly State Contributions For State Retirees and Retired Teachers					
Service at Retirement State Contribution					
30+ years of service	\$50.00				
20-29 years of service	\$37.50				
15-19 years of service	\$25.00				
Less than 15 years of service	\$0.00				
Dependents (Spouse)	\$0.00				
Education Support Staff	\$0.00				
Local Government	\$0.00				

There are no provisions for automatic escalation of the amounts illustrated above and they may not be increased without legislative approval. Consequently, this benefit is considered a flat dollar subsidy for the purpose of this valuation.

#### PREMIUM SUBSIDY PROVIDED BY EMPLOYERS TO RETIREES PARTICIPATING IN THE TENNESSEE PLAN

Some local education employers offer premium subsidies in addition to amounts contributed by the State. Specific employers, eligibility and subsidy amounts are listed in the following table:

Local Education Employers providing subsidy in addition to the State							
Local Education Agency 30+ Y.O.S. 20-29 Y.O.S. <20 Y.O.S. Support Staf							
Bells City Board of Education <sup>1</sup>	\$50.00	\$37.50	\$25.00	Same as teachers			
Carter County Schools	Difference between the full premium and the State Subsidy						
Clay County Schools <sup>1</sup>	\$50.00 \$37.50 \$25.00 Same as teach						
Clinton Schools <sup>1</sup>	\$50.00	\$37.50	\$25.00	Same as teachers			
Greenville City Schools <sup>2</sup>	\$50.00	\$37.50	\$25.00	Same as teachers			

Local Education Employers providing subsidy in addition to the State (continued)						
Local Education Agency	30+ Y.O.S.	20-29 Y.O.S.	<20 Y.O.S.	Support Staff		
Hamblen County Schools	\$50.00	\$37.50	\$25.00	Same as teachers		
Hawkins County Schools <sup>3</sup>	\$50.00	\$37.50	\$25.00	\$100-\$50		
Hickman County Schools <sup>4</sup>	\$75.17	\$47.84	\$27.34	Same as teachers		
Humboldt City Schools <sup>5</sup>	\$50.00	\$37.50	\$25.00	Same as teachers		
Jackson County BOE <sup>1</sup>	\$50.00	\$37.50	\$25.00	Same as teachers		
Kingsport County Schools	Differenc	e between the full p	remium and the St	ate Subsidy		
McNairy County Schools	\$13.00	\$12.89	\$12.28	Same as teachers		
Monroe County BOE	\$50.00	\$37.50	\$25.00	Same as teachers		
Morristown Schools <sup>1</sup>	\$50.00	\$37.50	\$25.00	Same as teachers		
Overton County Schools	\$50.00	\$37.50	\$25.00	Same as teachers		
Polk County Schools	\$121.00	\$121.00	\$121.00	Same as teachers		
Scott County Schools	\$50.00	\$37.50	\$25.00	Same as teachers		
Sevier County Schools	\$50.00	\$37.50	\$25.00	Same as teachers		
Sullivan County BOE	Difference between the full premium and the State Subsidy					
Sumner County BOE	\$50.00	\$37.50	\$25.00	Same as teachers		
Tri County Vocational School <sup>1</sup>	\$50.00	\$37.50	\$25.00	Same as teachers		
Union County Schools	\$50.00	\$37.50	\$25.00	\$37.50		
Williamson County Schools <sup>1</sup>	\$50.00	\$37.50	\$25.00	Same as teachers		

<sup>1.</sup> Requires at least 15 Y.O.S.

- 2. Requires instructional staff to be age 60 or older.
- For Hawkins County Schools Support Staff subsidy for 30+ Y.O.S. at \$100.00, 20-29 Y.O.S. at \$75.00 and <20 Y.O.S. at \$50.00.
- <sup>4.</sup> For Hickman County Schools subsidy amounts are based on the following service ranges: 30+ Y.O.S., 25-29 Y.O.S. and <25 Y.O.S. Employees are directly reimbursed monthly amounts on the state Medicare plan. Checks are written to the employees once a year.
- 5. For Humboldt City Schools subsidy amounts are based on the following service ranges: 20+ Y.O.S., 10-19 Y.O.S. and 5-9 Y.O.S.

Retirees of other local governmental employers are not eligible for any premium subsidy from the State. However, certain local employers subsidize retiree premiums with amounts matching those provided by the State to similarly situated State retirees. Such employers are listed in the table below:

Local Government Employers providing subsidy			
Association of County Mayors	Clarksville General Fund		
Bells, City Of	Clarksville Public Safety		
Bloomingdale Utility	Clarksville Transportation		
Bolivar	Clinton, Town of		
Buffalo River Regional Lib	Clinton Fire and Police		
Caney Fork Regional Lib	Clinton Housing Authority		
City of Humboldt	Forked Deer Regional Lib		
City of Lakewood	Ft Loudon Regional Lib		
City of Portland	Goodlettsville Board Members		
Clarksville Gas Water Sewer	Goodlettsville, City of		

Local Government Employers providing subsidy (continued)				
Greeneville Fire and Police	Overton County			
Greeneville Water Commission	Overton County Highway Department			
Greeneville, Town of	Overton County Nursing Home			
Hamblen Co Courthouse	Overton County 911			
Hamblen County Highway Department	Scott County Ambulance Service			
Hamblen County Board Members	Sevier County Fee Officers			
Hamblen County Garbage Collectors	Sevier County Lib			
Hamblen County Highway Commission	Stoned River Regional Lib			
Hamblen County Public Safety	Sumner County			
Hartsville/Trousdale County Government	Sumner County Highway			
Humboldt Utilities- Elec Co	Tennessee Co Commissioners Association			
Humboldt Utilities- Gas and Water	Tennessee CSA			
Jefferson City	Tennessee Education Association			
Jefferson City Public Safety	TN Co Hwy Officials Association			
Kingston Spring	TN Co Service Association			
Linebaugh Pub Lib	TN Sec Schools Athletic Association			
Madison Suburban Utility District	TN State Employees Assn.			
Middle Tennessee UT District	Union County EMS			
Mid-W Community Service Agency	Union County General Fund			
Milan, City of	Union County Officials			
Natural Gas Acquisition Co Clarksville	Washington County- Johnson City 911			
Nolichucky Regional Lib	White House, City of			
Norris	Williamson County			
Norris Fire and Police	Town of Woodbury			
Obion River Regional Lib				

#### **FUNDING VEHICLE**

There is no separate trust through which benefits for retirees are funded. No assets are currently accumulated or earmarked for this purposes. All approved benefits are paid by the State when due.

#### TERMINATION AND AMENDMENT

The post-employment benefits are extended to retirees and continued at the discretion of the State, which reserves the right (subject to State Statute and any collective bargaining agreements) to change or terminate benefits and to change contributions required from retirees in the future as circumstances change.

# SECTION E GASB DISCLOSURES (STATE OBLIGATION)

#### Required Actuarial Information (State Obligation for State Retirees) (GASB STATEMENT NO. 45)

Employer FYE June 30	2016	20151	20141
Normal Cost (service cost for one year)	\$ 3,775,102	\$ 3,793,919	\$ 3,647,999
Amortization of Unfunded Actuarial Accrued Liability	8,514,569	7,964,950	7,732,961
Annual Required Contribution (ARC)	12,289,671	11,758,869	11,380,960
Net ODED OH! at its (NOO) at her invite of the same	75 791 104	70 200 050	C4 901 000
Net OPEB Obligation (NOO) at beginning of the year  Annual Required Contribution (ARC)	75,781,194 12,289,671	70,308,850 11,758,869	64,891,000 11,380,960
Interest on NOO	2,841,795	2,812,354	2,595,640
Adjustment to ARC	(2,853,208)	(2,739,879)	(2,528,750)
Annual OPEB Cost (Expense)	12,278,258	11,831,344	11,447,850
Employer Contributions Made	TBD	(6,359,000)	(6,030,000)
Increase (decrease) in NOO	TBD	5,472,344	5,417,850
NOO at end of year	TBD	75,781,194	70,308,850

#### **Schedule of Funding Progress (State Employees)**

		Actuarial Accrued				UAAL as a
	Actuarial Value	Liability (AAL) -	Unfunded AAL			Percentage of
Actuarial	of Assets	Projected Unit Credit	(UAAL)	Funded Ratio	Covered Payroll	Covered Payroll
Valuation Date	(a)	(b)	(b - a)	(a / b)	(c)	([b - a] / c)
7/1/20111	\$0	\$220,509,000	\$220,509,000	0.00%	\$3,058,492,000	7.21%
7/1/2013	\$0	\$154,050,324	\$154,050,324	0.00%	\$3,228,485,148	4.77%
7/1/2015	\$0	\$163,698,993	\$163,698,993	0.00%	\$3,294,627,486	4.97%

#### Schedule of Employer Contributions (State Obligation for State Retirees)

	• •		Percentage of	
	Annual OPEB	Amount	Annual OPEB Cost	Net OPEB
Fiscal Year Ending	Cost	Contributed	Contributed	Obligation
6/30/20141	\$11,447,850	\$6,030,000	53%	\$70,308,850
6/30/20151	\$11,831,344	\$6,359,000	54%	\$75,781,194
6/30/2016	\$12,278,258	TBD	TBD	TBD

<sup>&</sup>lt;sup>1</sup> As reflected in prior Actuarial Valuation Reports and the State's Comprehensive Annual Financial Reports.

# Required Actuarial Information (State Obligation for Local Education Employees) (GASB STATEMENT NO. 45)

	<u> </u>		
Employer FYE June 30	2016	20151	20141
Normal Cost (service cost for one year)	\$ 2,686,503	\$ 2,693,391	\$ 2,589,799
Amortization of Unfunded Actuarial Accrued Liability	7,255,378	6,816,130	6,617,602
Annual Required Contribution (ARC)	9,941,881	9,509,521	9,207,400
N. OPER OUT & AVOOR OF A STATE OF	50 114 207	46 222 017	42 21 4 000
Net OPEB Obligation (NOO) at beginning of the year	50,114,297	46,332,017	42,314,000
Annual Required Contribution (ARC)	9,941,881	9,509,521	9,207,400
Interest on NOO	1,879,286	1,853,281	1,692,560
Adjustment to ARC	(1,886,833)	(1,805,522)	(1,648,943)
Annual OPEB Cost (Expense)	9,934,334	9,557,280	9,251,017
Employer Contributions Made	TBD	(5,775,000)	,
Increase (decrease) in NOO	TBD	3,782,280	4,018,017
Estimated NOO at end of year	TBD	50,114,297	46,332,017

### Schedule of Funding Progress (Local Education Employees)

		Actuarial Accrued				UAAL as a
	Actuarial Value	Liability (AAL) -	Unfunded AAL			Percentage of
Actuarial	of Assets	Projected Unit Credit	(UAAL)	Funded Ratio	Covered Payroll	Covered Payroll
Valuation Date	(a)	(b)	(b - a)	(a / b)	(c)	([b - a] / c)
7/1/20111	\$0	\$163,305,000	\$163,305,000	0.00%	N/A	N/A
7/1/2013	\$0	\$137,316,846	\$137,316,846	0.00%	N/A	N/A
7/1/2015	\$0	\$145,416,577	\$145,416,577	0.00%	N/A	N/A

### Schedule of Employer Contributions (State Obligation for Education Employees)

		reicemage of	
Annual OPEB	Amount	Annual OPEB Cost	Net OPEB
Cost	Contributed	Contributed	Obligation
\$9,251,017	\$5,233,000	57%	\$46,332,017
\$9,557,280	\$5,775,000	60%	\$50,114,297
\$9,934,334	TBD	TBD	TBD
	Cost \$9,251,017 \$9,557,280	Cost         Contributed           \$9,251,017         \$5,233,000           \$9,557,280         \$5,775,000	Annual OPEB         Amount         Annual OPEB Cost           Cost         Contributed         Contributed           \$9,251,017         \$5,233,000         57%           \$9,557,280         \$5,775,000         60%

<sup>&</sup>lt;sup>1</sup> As reflected in prior Actuarial Valuation Reports and the State's Comprehensive Annual Financial Reports.

Required Actuarial Information (GASB STATEMENTS NO. 43 & 45)										
Reporting Year	2016	2015	2014							
Contribution rate	N/A	N/A	N/A							
Actuarial valuation date	07/01/2015	07/01/2013	07/01/2013							
Annual OPEB cost	\$22,212,592	\$21,388,624	\$20,698,867							
Employer Contributions made	TBD	\$12,134,000	\$11,263,000							
Actuarial cost method	Projected Unit Credit	Projected Unit Credit	Projected Unit Credit							
Amortization method	Level % closed	Level % closed	Level % closed							
Single equivalent amortization period	20 years	21 years	22 years							
Asset valuation method	Unfunded	Unfunded	Unfunded							
Actuarial assumptions:										
Investment rate of return *	3.75%	4.00%	4.00%							
Projected salary increases *	not applicable with PUC	not applicable with PUC	not applicable with PUC							
Payroll growth assumptions	3.0%	3.0%	3.0%							
Initial Per Capita Cost trend rate**	1.5% / N/A	2.0% / N/A	2.0% / N/A							
Second Year Per Capita Cost trend rate**	6.0% / N/A	6.0% / N/A	6.0% / N/A							
Ultimate Per Capita Cost trend rate**	4.345% / N/A	4.2% / N/A	4.2% / N/A							
Years to Ultimate rate**	35	30	30							
* Includes general price inflation at	2.5%	2.5%	2.5%							

<sup>\*\*</sup> Applies to the gross premiums charged by the Tennessee Plan. However, subsidy provided by the State and local employers (with exception of School Districts of Kingsport, Carter and Sullivan Counties) bears no relation to that premium and, consequently, trend rates are not applicable to benefits provided by the majority of the employers.

Historical results as reflected in prior Actuarial Valuation Reports and the State's Comprehensive Annual Financial Reports.

#### DISCLOSURES FOR FISCAL YEAR ENDING 6/30/2017

GASB allows for performing actuarial valuations biennially with results applicable to two reporting years (per paragraph 12 of GASB Statement 45). However, a new fully compliant valuation would need to be performed if significant changes have occurred since the previous valuation that affect the valuation results, including significant changes in benefit provisions, the size or composition of the membership, or other factors that impact long-term actuarial assumptions through the reporting date. Refer also to Q&A 8.17.5 of the 2013-2014 Comprehensive Implementation Guide. In the absence of such changes, following disclosures can be used in the State's 2016/2017 fiscal year reporting.

Required Actuarial Information (State Obligation for State Retirees) (GASB STATEMENT NO. 45)											
Employer FYE June 30		2017		2016		20151					
Normal Cost (service cost for one year)	\$	3,916,668	\$	3,775,102	\$	3,793,919					
Amortization of Unfunded Actuarial Accrued Liability		8,770,006		8,514,569		7,964,950					
Annual Required Contribution (ARC)		12,686,674		12,289,671		11,758,869					
Net OPEB Obligation (NOO) at beginning of the year		TBD		75,781,194		70,308,850					
Annual Required Contribution (ARC)		12,686,674		12,289,671		11,758,869					
Interest on NOO		TBD		2,841,795		2,812,354					
Adjustment to ARC		TBD		(2,853,208)		(2,739,879)					
Annual OPEB Cost (Expense)		TBD		12,278,258		11,831,344					
Employer Contributions Made		TBD		TBD		(6,359,000)					
Increase (decrease) in NOO		TBD		TBD		5,472,344					
NOO at end of year		TBD		TBD		75,781,194					

## Schedule of Employer Contributions (State Obligation for State Retirees)

			Percentage of	
	Annual OPEB	Amount	Annual OPEB Cost	Estimated Net
Fiscal Year Ending	Cost	Contributed	Contributed	OPEB Obligation
6/30/20151	\$11,831,344	\$6,359,000	54%	\$75,781,194
6/30/2016	\$12,278,258	TBD	TBD	TBD
6/30/2017	TBD	TBD	TBD	TBD

<sup>&</sup>lt;sup>1</sup> As reflected in prior Actuarial Valuation Reports and the State's Comprehensive Annual Financial Reports.

# Required Actuarial Information (State Obligation for Local Education Employees) (GASB STATEMENT NO. 45)

Employer FYE June 30	2017	2016	20151
Normal Cost (service cost for one year)	\$ 2,787,247	\$ 2,686,503	\$ 2,693,391
Amortization of Unfunded Actuarial Accrued Liability	7,473,039	7,255,378	6,816,130
Annual Required Contribution (ARC)	10,260,286	9,941,881	9,509,521
Net OPEB Obligation (NOO) at beginning of the year	TBD	50,114,297	46,332,017
Annual Required Contribution (ARC)	10,260,286	9,941,881	9,509,521
Interest on NOO	TBD	1,879,286	1,853,281
Adjustment to ARC	TBD	(1,886,833)	(1,805,522)
Annual OPEB Cost (Expense)	TBD	9,934,334	9,557,280
Employer Contributions Made	TBD	TBD	(5,775,000)
Increase (decrease) in NOO	TBD	TBD	3,782,280
NOO at end of year	TBD	TBD	50,114,297

#### **Schedule of Employer Contributions (State Obligation for Education Employees)**

Percentage of Annual OPEB Cost Annual OPEB Amount Estimated Net Contributed **OPEB** Obligation Fiscal Year Ending Cost Contributed 6/30/20151 \$9,557,280 \$5,775,000 60% \$50,114,297 6/30/2016 \$9,934,334 **TBD TBD TBD** 6/30/2017 **TBD TBD TBD TBD** 

<sup>&</sup>lt;sup>1</sup> As reflected in prior Actuarial Valuation Reports and the State's Comprehensive Annual Financial Reports.

# APPENDIX RESULTS BY EMPLOYER

Results by Employer (Dollars in Thousands)

## **State Subsidy for State Employees**

n .	Cou as of July		Actuarial as of July		Normal	ARC for	Roll- Forward
Employer	Inactive	Active	Inactive	Active	Cost for FYE 2016	FYE 2016	ARC for FYE 2017
Austin Peay State University	138	899	628	766	47	119	123
Capitol Print Shop	-	ı	-	1	-	-	-
Chattanooga State Technical Community							
College	102	605	396	532	32	80	83
Cleveland State Community College	72	201	338	156	10	36	37
Columbia State Community College	78	248	332	254	14	45	46
Division of Accounts	30	121	128	136	7	21	22
Dyersburg State Community College	43	209	219	182	11	32	33
East Tennessee State University	369	2,300	1,621	2,008	120	309	319
Edison Governor's Books from Birth	7	100	25	74	4	10	10
GS Central Stores	-	4	-	0	0	0	0
GS Food Services	-	-	-	-	-	-	-
GS Printing	8	55	32	62	3	8	8
GS Purchasing	12	75	35	43	3	7	7
GS Records Management	- 12	-	-	-	-		
GS Warehousing and Distribution	10	28	36	23	1	5	5
Human Resources	31	106	147	89	5	18	18
Jackson State Community College	67	237	302	270	14	44	46
Middle Tennessee State University	357	2,201	1,568	2,244	127	325	336
Motlow State Community College	75	227	358	233	13	44	45
Motor Vehicle Management	4	25	18	38	2	5	5
Nashville State Technical Community							
College	60	367	287	312	19	50	52
Northeast State Technical Community							
College	36	387	180	308	20	45	47
Office of Information Resources	87	302	371	275	17	51	52
Pellissippi State Technical Community	(2)	<i>55</i> 0	20.4	527	21	75	77
College Postal Service	63 15	558 40	294 56	537 36	31	75 7	77 7
Records Management	13	7	30	30	0	0	0
Roane State Community College	80	341	351	403	21	61	63
Southwest State Community College	182	566	958	628	32	115	119
State of Tennessee	15,708	39,181	61,262	40,510	2,167	7,461	7,701
Tennessee Board of Regents Central Office	388	123	1,376	121	7	85	87
Tennessee Foreign Language Institute	-	17	-,0.0	4	1	1	1
Tennessee State University	174	1,303	823	1,130	66	167	173
Tennessee Technological University	325	1,174	1,489	1,180	64	202	209
TN Housing Development Agency	35	206	128	165	11	26	27
TN Student Assistance Corporation	10	51	50	52	3	8	9
TN Technical Center at Athens	8	21	35	16	1	4	4
TN Technical Center at Chattanooga	10	48	38	44	3	7	7
TN Technical Center at Covington	6	15	36	13	1	4	4

Results by Employer (Dollars in Thousands)

#### **State Subsidy for State Employees (continued)**

Employer	Cor as of July		Actuarial Liability as of July 1, 2015		Normal Cost for	ARC for	Roll- Forward ARC for
	Inactive	Active	Inactive	Active	<b>FYE 2016</b>	FYE 2016	FYE 2017
TN Technical Center at Crossville	5	30	12	21	2	3	3
TN Technical Center at Crump	7	20	43	22	1	5	5
TN Technical Center at Dickson	9	48	52	32	3	7	7
TN Technical Center at Elizabethton	7	30	25	25	2	4	5
TN Technical Center at Harriman	6	23	22	15	1	3	3
TN Technical Center at Hartsville	7	29	42	22	2	5	5
TN Technical Center at Hohenwald	12	28	53	19	1	5	5
TN Technical Center at Jacksboro	14	15	70	19	1	6	6
TN Technical Center at Jackson	9	45	46	56	3	8	9
TN Technical Center at Knoxville	18	49	87	31	2	8	9
TN Technical Center at Livingston	10	26	51	29	2	6	6
TN Technical Center at McKenzie	8	17	44	18	1	4	4
TN Technical Center at McMinnville	11	18	41	22	1	4	5
TN Technical Center at Memphis	15	65	64	52	3	9	10
TN Technical Center at Morristown	15	46	80	56	3	10	10
TN Technical Center at Murfreesboro	6	37	31	30	2	5	5
TN Technical Center at Nashville	7	62	22	42	3	6	7
TN Technical Center at Newbern	8	25	38	16	1	4	4
TN Technical Center at Oneida	7	22	31	24	1	4	4
TN Technical Center at Paris	6	28	32	32	2	5	5
TN Technical Center at Pulaski	3	28	12	32	2	4	4
TN Technical Center at Ripley	6	17	29	14	1	3	3
TN Technical Center at Shelbyville	12	34	47	32	2	6	6
TN Technical Center at Whiteville	4	19	18	20	1	3	3
TRICOR	36	110	155	56	5	16	16
Univ of Tennessee System	3,859	12,395	16,424	12,324	671	2,166	2,236
University of Memphis	532	2,560	2,306	2,273	131	369	381
Volunteer State Community College	85	424	385	391	23	63	65
Walters State Coummunity College	108	427	512	435	24	73	76
Total	23,422	69,025	94,693	69,006	3,775	12,290	12,687

Note: Totals above may differ from other totals in the Report due to rounding.

Amounts in the "Roll-Forward ARC" column are developed by increasing the Normal Cost with interest and increasing the amortization payment with the assumed payroll growth rate. Under the current assumptions, 30-year amortization factor used in calculating the adjustment to ARC is 26.56.

Results by Employer (Dollars in Thousands)

# **State Subsidy for Local Education Employees**

Employer	Cor as of Jul			Actuarial Liability as of July 1, 2015		ARC for	Roll- Forward
	Inactive	Active	Inactive	Active	FYE 2016	FYE 2016	ARC for FYE 2017
Achievement School District	-	126	-	24	4	5	5
Athens City	87	123	503	127	7	38	40
Alamo City Bd Ed	10	44	62	57	3	9	9
Alcoa City Schools	36	127	202	161	9	27	28
Anderson County Schools	162	568	943	666	36	116	120
Bedford County Schools	117	667	682	837	42	118	122
Bellscity Bd of Education	9	32	59	55	3	9	9
Benton County Schools	76	185	466	258	13	49	50
Bledsoe County Schools	39	150	227	230	11	34	35
Bradford Special School District	21	50	136	48	3	12	12
Bradley County BOE	254	721	1,553	733	42	156	161
Bristol	128	306	775	313	18	72	75
Campbell County Schools	219	392	1,232	607	28	119	123
Cannon County Schools	32	179	199	261	12	35	37
Carroll County Schools	5	19	16	31	2	4	4
Carter	221	437	1,466	913	48	167	173
Cheatham	90	501	522	465	28	77	80
Chester County Schools	48	172	287	235	12	38	39
City of Dayton Schools	25	59	154	61	3	14	15
Clay County Schools	56	90	388	128	7	33	34
Cleveland City	140	448	855	518	28	96	99
Clinton Schools	36	79	231	108	6	22	23
Cocke County Schools	124	336	730	453	22	81	84
Coffee County Schools	130	339	746	401	21	78	81
Covington City	-	-	-	-	-	-	_
Crockett County Schools	34	136	205	132	8	25	25
Cumberland BOE	159	507	943	619	32	110	113
Decatur County Schools	45	131	283	186	9	32	33
Dekalb County Schools	78	227	461	246	14	49	50
Dickson Co Board of Education	186	650	1,126	860	44	143	148
Dir Pay TE Ret Med	2	-	13	-	-	1	1
Dyer County BOE	90	249	595	285	15	59	61
Dyersburg City	142	215	902	284	14	73	76
Elizabethton	65	216	366	251	13	44	45
Etowah City Bd of Ed	7	27	40	20	1	4	5
Fayette County Schools	62	258	335	325	17	50	51
Fayetteville Schools	27	121	157	137	7	22	22
Fentress	100	160	633	216	11	53	55
Franklin County Schools	142	403	858	569	28	99	102
Franklin Special	127	355	664	416	23	77	80
Frayser Community Schools	-	35	_	6	1	1	1
Freedom Preparatory Academy	-	19	-	1	0	0	0
Gestalt Community Schools	-	40	-	14	2	2	2
Gibson County Bd of Ed	59	322	378	288	18	51	53

Results by Employer (Dollars in Thousands)

## **State Subsidy for Local Education Employees (continued)**

Employer	Co as of Jul		Actuarial as of Jul		Normal Cost for	ARC for FYE 2016	Roll- Forward
	Inactive	Active	Inactive	Active	FYE 2016	F Y E 2016	ARC for FYE 2017
Giles County Schools	178	336	1,046	480	24	100	103
GRAD Restart Academies, Inc.	-	21	-	12	1	2	2
Grainger County Schools	79	252	486	355	17	59	61
Greene County Schools	241	513	1,470	581	32	134	138
Greeneville	124	230	760	411	20	79	81
Grundy County Schools	69	168	408	245	12	44	46
H R Bruce Sp Sch	25	47	157	69	3	15	15
Hamblen County Schools	327	729	2,179	1,017	56	215	222
Hancock County Schools	31	103	186	158	7	24	25
Hardeman County Schools	108	341	601	436	22	74	76
Hardin County Schools	125	261	754	452	19	80	82
Hawkins County Schools	200	617	1,397	907	50	165	170
Haywood County Schools	107	274	617	329	17	64	66
Henderson County Schools	90	311	563	385	20	67	69
Henry County BOE	104	232	628	253	14	58	60
Hickman County Schools	60	261	374	509	28	72	75
Houston County Schools	24	100	153	147	7	22	23
Humboldt	75	100	508	147	8	40	42
Humphreys Co BOE	72	243	448	344	17	56	58
Huntingdon Sp Sch	43	98	281	125	6	26	27
Jackson County Schools	38	128	286	225	11	36	38
Jackson-Madison County BOE	451	927	2,572	1,205	62	251	259
Jefferson County Schools	166	541	970	618	34	114	117
Johnson County Board of Education	120	185	645	233	12	56	58
Johnson County BOE	3	-	21	-	-	1	1
Kingsport	231	-	1,501	-	-	75	77
KIPP Memphis Collegiate Schools	-	25	-	8	1	1	1
Knox County Schools	1,278	4,918	7,361	4,872	286	897	926
Lake County Schools	34	82	196	97	5	20	20
Lauderdale County Schools	104	348	638	431	23	76	78
Lawrence County Schools	206	498	1,268	614	33	126	130
LEAD Public Schools	-	21	-	4	1	1	1
Lebanon SSD	65	243	366	255	15	46	47
Lenoir City	52	154	285	170	10	32	33
Lewis County Schools	36	139	227	190	10	30	31
Lexington City Schools	33	87	220	93	5	21	21
Libertas School of Memphis	-	-	-	-	0	0	0
Lincoln County Schools	94	301	573	386	19	67	69
Little Tn Vly Ed	-	-	-	-	_	-	_
Loudon	110	383	631	399	23	74	76
Macon BOE	68	290	433	347	18	57	59
Manchester Schools	47	124	304	152	8	31	32

Results by Employer (Dollars in Thousands)

## **State Subsidy for Local Education Employees (continued)**

Employer	Co as of Jul		Actuarial as of Jul		Normal Cost for	ARC for	Roll- Forward
r V	Inactive	Active	Inactive	Active	FYE 2016	FYE 2016	ARC for FYE 2017
Marion County Schools	113	300	664	397	20	72	75
Marshall	130	400	818	447	25	88	91
Maury Co BOE	339	884	1,900	1,073	56	205	211
McKenzie Special School District	42	100	229	131	7	25	25
McMinn Count Bd of Ed	158	382	937	507	25	97	100
McNairy County School System	119	388	734	677	33	104	107
Meigs County Board of Education	31	132	191	155	8	26	26
Milan SSD	69	153	417	173	9	39	40
Monroe	117	392	755	637	33	103	106
Moore	29	73	169	93	5	18	18
Morgan County Schools	49	301	272	397	20	54	55
Morristown Schools	-	-	-	-	-	-	-
MS Loc Ed Sup Direct Pay	2	-	9	-	-	0	0
MS Sullivan Co Supp Staff	-	-	-	-	-	-	-
Murfreesboro City Schools	121	591	712	644	36	104	107
Newport City Schools	21	64	131	88	4	15	16
Oak Ridge Schools	155	418	865	635	30	105	109
Obion County Schools	118	293	767	420	19	79	81
Oneida Spec Sch	35	100	225	157	7	26	27
Overton County Schools	109	235	754	411	20	78	81
Paris Special School District	40	127	227	150	8	27	28
Perry County Schools	23	86	160	137	6	21	22
Pickett County Schools	26	64	172	110	5	19	19
Polk Co BOE	69	181	457	306	19	57	58
Promise Academy Spring Hill, Inc.	-	12	-	5	1	1	1
Putnam County Schools	254	741	1,539	928	48	171	177
Rhea County Schools	75	316	447	451	21	66	68
Richard Hardy Memorial School	-	27	-	33	2	3	4
Roane County Schools	197	491	1,226	680	33	128	132
Robertson County Schools	226	886	1,352	902	51	164	169
Rogersville City Schools	15	72	102	100	5	15	16
S. Carroll Co Sp Dist-Non	8	27	51	49	2	7	7
Scott BOE	71	256	498	450	22	70	72
Sequatchie County Schools	37	164	211	193	10	30	31
Sevier	225	1,110	1,468	2,008	99	272	281
Smith County Schools	65	246	399	324	16	52	53
Stewart County Schools (BOE)	42	167	269	274	12	39	40
Sullivan	226	774	1,680	1,541	85	246	254
Sumner	386	-	2,549	-	-	127	131
Sweetwater Schools	25	105	127	149	7	21	22
Teachers - Unallocated	2,003	2	11,167	6	0	558	574
Tipton	141	832	841	1,011	53	146	151

Results by Employer (Dollars in Thousands)

#### **State Subsidy for Local Education Employees (continued)**

Employer	Count as of July 1, 2015		Actuarial Liability as of July 1, 2015		Normal Cost for	ARC for FYE 2016	Roll- Forward ARC for
	Inactive	Active	Inactive	Active	FYE 2016	F 1 E 2010	FYE 2017
Trenton Spec Sch	59	103	347	141	7	31	32
Tri Co Voc S Te	2	-	7	-	-	0	0
Trousdale County Schools	20	100	134	105	5	17	18
Tullahoma	155	259	882	316	17	77	79
Unicoi	78	193	457	223	12	45	47
Union City Bd of Ed	61	124	385	153	8	35	36
Union County	45	319	271	500	26	65	67
Van Buren	27	72	154	93	5	17	18
Warren County Schools	165	454	1,017	633	30	113	116
Washington County Schools	197	546	1,144	711	36	128	132
Wayne	74	178	461	263	12	48	50
Weakley County Schools	141	333	824	459	22	86	89
West Carroll Sp Sch	21	73	146	121	5	18	19
White County Schools	106	293	646	369	19	70	72
Williamson County Schools	-	-	-	-	=	-	-
Total	15,670	39,791	94,274	51,143	2,687	9,942	10,260

Note: Totals above may differ from other totals in the Report due to rounding.

Amounts in the "Roll-Forward ARC" column are developed by increasing the Normal Cost with interest and increasing the amortization payment with the assumed payroll growth rate. Under the current assumptions, 30-year amortization factor used in calculating the adjustment to ARC is 26.56.

Results by Employer (Dollars in Thousands)

#### **Local Education**

Employer	Count as of July 1, 2015		Actuarial Liability as of July 1, 2015		Normal Cost for	ARC for FYE	Roll- Forward ARC for
	Inactive	Active	Inactive	Active	FYE 2016	2016	FYE 2017
Bells City Bd of Education	9	52	59	80	4	10	10
Carter	239	774	7,509	19,715	1,647	2,770	2,865
Clay County Schools	56	148	388	187	11	34	35
Clinton Schools	36	121	231	156	8	24	25
Cumberland County Schools	-	-	-	-	-	0	0
Greenville City Schools	131	364	766	575	33	86	89
Hamblen County Schools	341	1,135	2,207	1,507	94	261	269
Hawkins County Schools	209	1,088	1,421	2,023	129	277	286
Hickman County Schools	63	446	533	1,088	71	135	139
Humboldt	78	187	520	263	16	47	48
Humphreys County Schools	-	-	-	1	-	-	1
Jackson County Schools	38	144	286	249	12	34	35
Kingsport	329	-	9,153	1	-	583	600
McNairy County School System	126	598	224	292	18	38	39
Monroe County Board of Eduation	124	619	772	960	56	125	129
Morristown Schools	_	-	-	-	-	0	0
MS Loc Ed Sup Direct Pay	-	-	-	-	-	-	-
Overton County Schools	110	367	757	607	34	88	91
Polk Co BOE	77	277	1,319	511	38	123	127
Scott County Schools	74	426	508	675	37	84	87
Sevier	243	1,856	1,510	3,089	172	370	382
Sullivan	709	1,174	25,516	31,168	2,565	4,946	5,113
Sumner County Board of Education	395	-	6,356	-	-	274	282
Teacher-Retiree	-	-	-	-	-	-	-
Union City Bd of Ed	-	-	-	-	-	0	0
Union County	47	498	276	722	47	89	92
Total	3,434	10,274	60,312	63,867	4,991	10,394	10,744

Note: Totals above may differ from other totals in the Report due to rounding.

Amounts in the "Roll-Forward ARC" column are developed by increasing the Normal Cost with interest and increasing the amortization payment with the assumed payroll growth rate. Under the current assumptions, 30year amortization factor used in calculating the adjustment to ARC is 26.56.

Results by Employer (Dollars in Thousands)

## **Local Government**

Employer	Count as of July 1, 2015		Actuarial Liability as of July 1, 2015		Normal	ARC for	Roll- Forward
	Inactive	Active	Inactive	Active	Cost for FYE 2016	FYE 2016	ARC for FYE 2017
Bells	1	48	3	49	3	5	5
Bloomingdale Utility	-	12	-	14	1	1	1
Bolivar	5	120	27	139	7	15	15
City of Lakewood	-	7	-	8	0	1	1
Clarksville General Fund	5	1,249	5	1,043	62	104	108
Clinton	1	174	4	175	9	18	19
Clinton Housing Authority	-	4	-	0	0	0	0
Giles County	-	-	-	-	-	0	0
Goodlettsville, City of	-	146	-	133	7	13	13
Greeneville	25	461	131	518	27	60	62
Greeneville Fire and Police	-	-	-	1	-	0	0
Greeneville Water Comm	-	1	-	1	-	0	0
Hamblen Co Courthouse	9	775	36	732	41	80	83
Hamblen County Board Members	-	-	-	1	-	0	0
Hamblen County Highway Dept	-	1	-	ı	-	0	0
Hartsville/Trousdale County Govt	12	124	21	123	6	14	14
Humboldt Utilities - Elec. Co.	-	1	-	1	ı	0	0
Humboldt Utilities - Gas and Water	-	-	-	1	-	0	0
Humboldt, City of	11	238	58	245	13	28	28
Jefferson City	1	130	3	138	7	14	15
Kingston Springs, Town of	1	26	4	16	1	2	2
Linebaugh Pub Lib	-	43	-	43	2	4	4
Middle Tenn UT Dist	1	124	-	170	8	15	15
Mid-W Community Serv Agency	-	83	-	47	3	5	5
Milan, City of	2	110	-	85	5	9	9
Monroe County	9	572	25	552	31	59	61
Norris	1	21	3	25	1	3	3
Overton County	11	496	24	455	26	50	51
Overton County 911	-	4	-	1	0	0	0
Overton County Highway Department	-	31	-	29	2	3	3
Overton County Nursing Home	-	155	-	190	9	17	17
Portland, City of	16	152	48	110	7	15	15
Scott Co General Fund	14	449	47	369	22	42	44
Scott County Ambulance Service	-	-	-	-	-	0	0
Sevier County General Fund	12	1,545	26	1,506	85	158	163
Sumner County	30	2,470	82	1,919	121	222	229
Sumner County Highway	-	-	-	-	-	0	0
Tennessee CSA	8	960	-	1,422	72	126	130
Tennessee Education Association	26	63	127	72	3	11	12
TN County Commissioners Assn.	-	-	-	-	-	0	0
TN County Highway Officials	-	1	-	4	0	0	0
TN County Services Association	1	2	6	1	0	0	0
TN Sec Sch Ath Assn	2	18	7	30	1	3	3
TN State Employees Association	2	24	12	42	2	4	4

Results by Employer (Dollars in Thousands)

### **Local Government (continued)**

Employer	Count as of July 1, 2015		Actuarial Liability as of July 1, 2015		Normal Cost for	ARC for	Roll- Forward
	Inactive	Active	Inactive	Active	FYE 2016	FYE 2016	ARC for FYE 2017
Union County General Fund	-	127	-	58	5	7	7
Washington County- Johnson City 911	2	52	0	52	3	5	5
White House, City of	-	101	-	68	4	7	7
Williamson County	2	2,642	-	1,983	126	224	231
Woodbury, Town of	1	39	3	41	2	4	4
Total	211	13,798	701	12,609	726	1,346	1,392

Note: Totals above may differ from other totals in the Report due to rounding.

Amounts in the "Roll-Forward ARC" column are developed by increasing the Normal Cost with interest and increasing the amortization payment with the assumed payroll growth rate. Under the current assumptions, 30-year amortization factor used in calculating the adjustment to ARC is 26.56.

Actuarial liability, benefit payments and normal cost results are calculated directly for each participant and allocated to associated employers. Amortization of UAAL is developed for each employer individually. The actuarial assumptions outlined in the Report were selected for use for the measurement of the obligation for the plan as a whole, rather than based on experience for any individual employer. Thus, the results shown could be different than a calculation of the actuarial liability performed separately for a particular employer or component.

Results by employer, as reflected on these pages, are based on data provided by State representatives (including indicators as to what employer the employees and retirees are associated with as of June 30, 2015). We did not audit or validate this census data. Furthermore, while the actuarial assumptions and methods employed are reasonable for the group as a whole, they may not be reasonable for any individual employer.